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I.—ALLOWABLE PRESSURE AND CORRESPONDING COMPRESSION OF HELICAL SPRINGS OF ROUND STEEL.

Maximum Fiber Stress	No. W. & M. Wire Gauge	Diameter of Wire	Greatest Allowable Pressure in Lbs. and Corresponding Compression in Inches Per Coil. Pitch Diameter of Spring.																			
			1" / 16	3" / 32	1" / 8	5" / 32	3" / 16	1" / 4	5" / 16	3" / 8	7" / 16	1" / 2	5" / 8	3" / 4	7" / 8	1"	1 1/8"	1 1/4"	1 3/8"	1 1/2"	1 5/8"
125,000	25	.020"	6.25	4.21	3.21	2.50	2.06	1.545	1.24	1.042	.895										
			.0079	.0164	.0298	.0453	.0644	.1150	.1792	.2565	.3545										
	24	.023"	9.5	6.3	4.75	3.71	3.15	2.38	1.845	1.521	1.325										
			.0063	.0141	.0262	.0382	.0563	.1011	.1528	.2173	.2991										
	23	.025"	12.28	8.15	6.08	4.9	4.025	3.05	2.5	2.065	1.74	1.52									
			.0058	.0126	.023	.0303	.0516	.0929	.1481	.2111	.2812	.3671									
	22	.028"	17.3	11.5	8.63	6.85	5.70	4.32	3.46	2.83	2.39	2.18									
			.0052	.0117	.0206	.0325	.0469	.0832	.1304	.1840	.2463	.3425									
	1" / 32	.031"		15.63	12.7	9.35	7.82	5.87	4.67	3.91	3.36	2.94	2.33								
				.0106	.0205	.0293	.043	.0757	.1171	.1691	.2303	.3022	.467								
150,000	21	.032"		20.8	15.51	12.4	10.32	7.7	6.14	5.085	4.44	3.78	3.13								
				.0124	.0221	.0342	.0496	.0814	.1350	.1937	.2681	.3433	.553								
	20	.035"			20.1	16.2	13.45	10.08	8.1	6.66	5.75	4.96	4.05	3.39							
					.0199	.0313	.0448	.0799	.1251	.1773	.2435	.3139	.5158	.7259							
	19	.041"			32.6	26.2	21.65	16.2	13.04	10.85	9.27	8.1	6.52	5.35	4.57						
					.0172	.0268	.0381	.0682	.1069	.1535	.2079	.2731	.4296	.608	.8237						
	18	.047"				39.12	32.6	24.55	19.6	16.44	13.95	12.3	9.8	8.1	6.92	6.14					
						.0233	.0336	.0587	.0934	.1352	.1817	.2412	.3738	.5358	.7249	.962					
	17	.054"				59.4	49.6	37.25	29.7	24.66	21.2	18.55	14.75	12.4	10.58	9.255	8.23				
						.02	.0291	.0519	.0814	.1154	.1572	.2067	.3198	.4685	.6305	.8254	1.043				
	1" / 16	.062"					74.9	56.1	44.9	37.3	32.	28.	22.4	18.63	16.1	13.95	12.5	11.22			
							.0265	.0473	.0738	.1053	.1437	.1889	.2939	.4244	.5887	.753	.9592	1.183			
	16	.063"					78.24	58.7	46.9	39.2	33.9	29.4	23.5	19.6	16.8	14.7	13.2	11.9	10.75		
							.0248	.0443	.0689	.0993	.1324	.1775	.2689	.400	.5421	.7103	.9065	1.122	1.355		
	15	.072"					117.3	80.75	70.65	58.7	50.20	43.6	35.2	29.	25.	21.9	19.5	17.5	16.05		
							.0218	.0357	.0608	.0872	.1183	.1542	.2426	.3468	.4735	.6208	.7857	.9680	1.180		
	14	.080"						121.	96.6	80.5	69.15	60.4	48.28	40.1	34.6	30.1	26.75	24.2	22.1	20.2	
								.0354	.055	.079	.1077	.1417	.2197	.3169	.433	.5638	.7090	.8855	1.0715	1.277	
140,000	13	.092"						171.	135.3	113.5	97.6	85.5	68.9	57.3	48.8	42.6	37.8	34.5	31.3	28.6	
								.0288	.0439	.0635	.0865	.1140	.1790	.2577	.3475	.4522	.5728	.7180	.8854	1.030	
	3" / 32	.093"						178.	142.	118.2	99.5	89.	71.2	59.1	50.9	44.3	39.6	35.7	32.3	29.3	27.3
								.0283	.0438	.0631	.0842	.1132	.1763	.2532	.3460	.4510	.5708	.710	.8529	1.017	1.193
	12	.105"							204.	170.	140.	127.5	102.	85.4	73.	63.4	56.0	51.1	46.3	42.6	38.9
									.0378	.0561	.0762	.1003	.1559	.2237	.3060	.389	.5010	.627	.758	.903	1.104
	11	.120"							303.	253.	217.5	190.	152.5	126.8	108.7	95.2	84.2	76.2	69.2	63.5	58.5
									.0338	.0488	.0664	.0871	.1363	.1965	.2667	.3489	.4397	.5242	.6590	.7872	.9208

Contributed by Henry L. Hanson.

II.—ALLOWABLE PRESSURE AND CORRESPONDING COMPRESSION OF HELICAL SPRINGS OF ROUND STEEL.

Max. Fiber Stress	No. W. & M. Wire Gauge	Diameter of Wire	Greatest Allowable Pressure in Lbs. and Corresponding Compression in Inches Per Coil. Pitch Diameter of Spring.																					
			3" / 8	7" / 16	1" / 2	5" / 8	3" / 4	7" / 8	1"	1 1/8"	1 1/4"	1 3/8"	1 1/2"	1 5/8"	1 3/4"	1 7/8"	2"	2 1/4"	2 1/2"	2 3/4"	3"	3 1/4"	3 1/2"	3 3/4"	4"	4 1/4"
140,000	1" / 8	.125"	286.	245.	214.	171.5	143.	121.9	107.3	95.	85.2	78.	71.5	65.8	60.8	57.2										
			.047	.064	.0834	.1302	.1881	.2542	.3345	.4215	.5195	.6345	.7463	.8768	1.0160	1.230										
	10	.135"	359.	309.	270.	217.	171.	154.	135.	120.	108.5	98.7	90.2	82.7	77.2	71.8	67.5									
			.043	.0589	.0774	.1210	.1655	.2359	.3185	.3911	.4894	.5841	.6979	.8572	.9568	1.081	1.240									
	9	.148"		408.	356.	285.	237.5	207.	178.	158.	142.4	130.	118.5	109.5	102.	95.	89.									
				.0537	.1058	.1100	.1589	.2127	.2825	.3563	.4410	.5370	.6345	.7440	.9194	.9936	1.130									
	5" / 32	.156"		480.	418.	333.	270.	239.	208.	185.3	167.	152.2	139.	128.	119.4	111.6	104.6	92.7								
				.0513	.0672	.1042	.1464	.2055	.2674	.3386	.4196	.5066	.6036	.7056	.8266	.9428	1.076	1.357								
	8	.162"			468.	376.	311.5	276.5	234.	207.	187.5	170.8	156.	143.6	134.	125.5	117.	103.6								
					.0647	.1012	.1460	.2043	.2588	.3255	.4061	.4906	.5820	.6810	.7940	.9132	1.035	1.305								
	7	.177"			608.	487.	406.	347.	305.	270.	243.4	223.5	205.	187.6	174.2	163.4	152.5	135.5	122.							
					.0589	.092	.1398	.1799	.2366	.2979	.3721	.4501	.5372	.6132	.7242	.8354	.9467	1.198	1.480							
125,000	3" / 16	.1875"			642.	522.	426.	367.	320.	288.	256.	233.	213.	197.	183.	170.	160.	142.5	128.3							
					.050	.0792	.1119	.1527	.1991	.2533	.3116	.3760	.4450	.525	.620	.700	.800	1.020	1.230							
	6	.192"			696.	556.	465.	396.	348.	309.	278.	254.	232.	214.	199.	186.	174.	154.5	139.3	126.3						
					.049	.077	.110	.149	.192	.247	.305	.365	.440	.515	.600	.695	.785	.990	1.220	1.480						
	5	.207"				694.	579.	495.	432.	385.	346.	315.2	288.	266.	247.	232.	216.	192.5	175.	158.	144.5	133.9				
						.071	.1010	.138	.1800	.239	.283	.343	.405	.470	.550	.633	.730	.910	1.130	1.370	1.650	1.920				
	7" / 32	.218"				812.	678.	580.	509.	452.	408.	369.	339.	310.	291.	270.	255.	225.	204.	185.	169.5	155.9				
						.0665	.097	.132	.171	.215	.268	.322	.379	.445	.530	.595	.680	.860	1.060	1.290	1.540	1.780				
	4	.225"				895.	746.	640.	560.	498.	447.	407.	372.	345.	320.	299.	280.	248.	224.	203.	187.	172.2				
						.065	.092	.122	.165	.210	.256	.313	.365	.430	.505	.575	.663	.840	1.060	1.270	1.480	1.740				
	3	.244"				1120.	950.	811.	711.	632.	570.	527.	475.	438.	405.	381.	356.	316.	284.	259.	237.5	220.				
						.0595	.088	.116	.154	.194	.242	.295	.350	.415	.472	.550	.620	.775	.970	1.180	1.360	1.600				
	1" / 4	.250"					1027.	880.	760.	685.	617.	560.	513.	476.	440.	410.	385.	342.	308.	281.	266.	236.				
							.084	.110	.147	.188	.232	.284	.338	.395	.460	.525	.598	.760	.945	1.130	1.360	1.570				
	2	.263"					1195.	1125.	895.	795.	717.	632.	598.	551.	501.	478.	448.	400.	359.	326.	298.	278.7	258.	238.		
							.079	.106	.142	.180	.223	.264	.325	.375	.435	.500	.580	.725	.910	1.080	1.290	1.540	1.760	1.950		
	9 / 32	.281"					1450.	1240.	1087.	969.	869.	794.	724.	665.	620.	580.	543.	482.	435.	395.	362.	335.	310.	290.4		
							.074	.100	.134	.167	.205	.253	.295	.358	.410	.473	.532	.660	.825	1.010	1.200	1.400	1.630	1.890		
	1	.283"						1264.	1110.	985.	886.	805.	740.	682.	634.	592.	564.	492.	439.	402.	370.	341.7	317.	296.6		
								.099	.133	.166	.203	.252	.294	.348	.405	.465	.530	.650	.820	.950	1.190	1.390	1.620	1.860		
	1/0	.307"						1630.	1420.	1260.	1135.	1035.	945.	872.	810.	758.	710.	630.	568.	516.	473.	436.	406.	378.6	355.	334.
								.093	.121	.152	.186	.228	.272	.322	.372	.427	.490	.610	.760	.910	1.080	1.260	1.490	1.680	1.940	2.180
	5" / 16	.312"							1575.	1376.	1220.	1100.	1000.	915.	845.	775.	732.	687.	610.	550.	500.	460.	421.7	392.	366.3	343.
									.084	.110	.138	.172	.208	.247	.290	.336	.386	.442	.550	.690	.830	1.000	1.150	1.330	1.540	1.780

Contributed by Henry L. Hanson.

1906, BY THE INDUSTRIAL PRESS, NEW YORK.

I.—ALLOWABLE PRESSURE AND CORRESPONDING COMPRESSION OF HELICAL SPRINGS OF ROUND STEEL.

Maximum Fiber Stress	No. W. & M. Wire Gauge	Diameter of Wire	Greatest Allowable Pressure in Lbs. and Corresponding Compression in Inches Per Coil. Pitch Diameter of Spring.																		
			1" / 10	3" / 32	1" / 8	5" / 32	3" / 10	1" / 4	5" / 16	3" / 8	7" / 10	1" / 2	5" / 8	3" / 4	7" / 8	1"	1 1/8"	1 1/4"	1 3/8"	1 1/2"	1 5/8"
125,000	25	.020"	6.25	4.21	3.21	2.50	2.06	1.545	1.24	1.042	.895										
			.0079	.0164	.0298	.0453	.0644	.1150	.1792	.2565	.3545										
	24	.023"	9.5	6.3	4.75	3.71	3.15	2.38	1.845	1.521	1.325										
			.0063	.0141	.0262	.0382	.0563	.1011	.1528	.2173	.2991										
	23	.025"	12.28	8.15	6.08	4.9	4.025	3.05	2.5	2.065	1.74	1.52									
			.0058	.0126	.023	.0363	.0516	.0929	.1481	.2111	.2812	.3671									
	22	.028"	17.3	11.5	8.63	6.85	5.76	4.32	3.46	2.83	2.39	2.18									
			.0052	.0117	.0206	.0325	.0469	.0832	.1304	.1840	.2463	.3425									
	1" / 32	.031"		15.63	12.7	9.35	7.82	5.87	4.67	3.91	3.36	2.94	2.33								
				.0106	.0205	.0293	.043	.0757	.1171	.1691	.2303	.3022	.467								
190,000	21	.032"		20.8	15.51	12.4	10.32	7.7	6.14	5.085	4.44	3.78	3.13								
				.0124	.0221	.0342	.0496	.0814	.1350	.1937	.2681	.3433	.553								
	20	.035"			20.1	16.2	13.45	10.08	8.1	6.66	5.75	4.96	4.05	3.39							
					.0199	.0313	.0448	.0799	.1251	.1773	.2435	.3139	.5158	.7259							
	19	.041"			32.6	26.2	21.65	16.2	13.04	10.85	9.27	8.1	6.52	5.35	4.57						
					.0172	.0268	.0381	.0682	.1069	.1535	.2079	.2731	.4296	.608	.8237						
	18	.047"				39.12	32.6	24.55	19.6	16.44	13.95	12.3	9.8	8.1	6.92	6.14					
						.0233	.0336	.0587	.0934	.1352	.1817	.2412	.3738	.5358	.7249	.962					
	17	.054"				59.4	49.6	37.25	29.7	24.66	21.2	18.55	14.75	12.4	10.58	9.255	8.23				
						.02	.0291	.0519	.0814	.1154	.1572	.2067	.3198	.4665	.6305	.8254	1.043				
	1" / 16	.062"					74.9	56.1	44.9	37.3	32.	28.	22.4	18.63	16.1	13.95	12.5	11.22			
							.0265	.0473	.0738	.1053	.1437	.1889	.2939	.4244	.5887	.753	.9592	1.183			
	16	.063"					78.24	58.7	46.9	39.2	33.9	29.4	23.5	19.6	16.8	14.7	13.2	11.9	10.75		
							.0248	.0443	.0689	.0993	.1324	.1775	.2689	.400	.5421	.7103	.9065	1.122	1.355		
	15	.072"					117.3	80.75	70.05	58.7	50.20	43.6	35.2	29.	25.	21.9	19.5	17.5	16.05		
							.0218	.0357	.0608	.0872	.1183	.1542	.2426	.3468	.4735	.6208	.7857	.9686	1.180		
	14	.080"						121.	96.6	80.5	69.15	60.4	48.28	40.1	34.6	30.1	26.75	24.2	22.1	20.2	
								.0354	.055	.079	.1077	.1417	.2197	.3169	.433	.5638	.7096	.8855	1.0715	1.277	
140,000	13	.092"						171.	135.3	113.5	97.6	85.5	68.9	57.3	48.8	42.6	37.8	34.5	31.3	28.6	
								.0288	.0439	.0635	.0865	.1140	.1796	.2577	.3475	.4522	.5728	.7180	.8854	1.030	
	3" / 32	.093"						178.	142.	118.2	99.5	89.	71.2	59.1	50.9	44.3	39.6	35.7	32.3	29.3	27.3
								.0283	.0438	.0631	.0842	.1132	.1763	.2532	.3460	.4510	.5708	.710	.8529	1.017	1.193
	12	.105"							204.	170.	146.	127.5	102.	85.4	73.	63.4	56.8	51.1	46.3	42.6	38.9
									.0378	.0561	.0762	.1003	.1559	.2237	.3060	.389	.5010	.627	.758	.903	1.104
	11	.120"							303.	253.	217.5	190.	152.5	126.8	108.7	95.2	84.2	76.2	69.2	63.5	58.5
									.0338	.0488	.0664	.0871	.1363	.1965	.2667	.3489	.4397	.5242	.6590	.7872	.9208

Contributed by Henry L. Hanson.

II.—ALLOWABLE PRESSURE AND CORRESPONDING COMPRESSION OF HELICAL SPRINGS OF ROUND STEEL.

Max. Fiber Stress	No. W. & M. Wire Gauge	Diameter of Wire	Greatest Allowable Pressure in Lbs. and Corresponding Compression in Inches Per Coil. Pitch Diameter of Spring.																						
			3" / 8	7" / 10	1" / 2	5" / 8	3" / 4	7" / 8	1"	1 1/8"	1 1/4"	1 3/8"	1 1/2"	1 5/8"	1 3/4"	1 7/8"	2"	2 1/4"	2 1/2"	2 3/4"	3"	3 1/4"	3 1/2"	3 3/4"	4"	4 1/4"
140,000	1" / 8	.125"	286.	245.	214.	171.5	143.	121.9	107.3	95.	85.2	78.	71.5	65.8	60.8	57.2										
			.047	.064	.0834	.1302	.1881	.2542	.3345	.4215	.5195	.6345	.7463	.8768	1.0166	1.236										
	10	.135"	359.	309.	270.	217.	171.	154.	135.	120.	108.5	98.7	90.2	82.7	77.2	71.8	67.5									
			.043	.0589	.0774	.1210	.1655	.2359	.3185	.3911	.4894	.5841	.6979	.8572	.9569	1.081	1.240									
	9	.148"		408.	356.	285.	237.5	207.	178.	158.	142.4	130.	118.5	109.5	102.	95.	89.									
				.0537	.1058	.1100	.1589	.2127	.2825	.3563	.4410	.5376	.6345	.7440	.9194	.9936	1.130									
	5" / 32	.156"		480.	418.	333.	270.	239.	208.	185.3	167.	152.2	139.	128.	119.4	111.6	104.6	92.7								
				.0513	.0672	.1042	.1464	.2055	.2674	.3386	.4196	.5086	.6036	.7056	.8266	.9428	1.076	1.357								
	8	.162"			468.	376.	311.5	276.5	234.	207.	187.5	170.8	156.	143.6	134.	125.5	117.	103.6								
					.0647	.1012	.1460	.2043	.2588	.3255	.4061	.4906	.5826	.6810	.7946	.9132	1.035	1.305								
	7	.177"			608.	487.	406.	347.	305.	270.	243.4	223.5	205.	187.6	174.2	163.4	152.5	135.5	122.							
					.0589	.092	.1398	.1799	.2366	.2979	.3721	.4501	.5372	.6132	.7242	.8354	.9467	1.198	1.480							
125,000	3" / 16	.1875"			642.	522.	426.	367.	320.	288.	256.	233.	213.	197.	183.	170.	160.	142.5	128.3							
					.050	.0792	.1119	.1527	.1991	.2533	.3116	.3760	.4450	.525	.620	.700	.800	1.020	1.230							
	6	.192"			696.	556.	465.	396.	348.	309.	278.	254.	232.	214.	199.	186.	174.	154.5	139.3	126.3						
					.049	.077	.110	.149	.192	.247	.305	.365	.440	.515	.600	.695	.785	.990	1.220	1.480						
	5	.207"				694.	579.	495.	432.	385.	346.	315.2	288.	266.	247.	232.	216.	192.5	175.	158.	144.5	133.9				
						.071	.1010	.138	.1800	.239	.283	.343	.405	.470	.550	.633	.730	.910	1.130	1.370	1.650	1.920				
	7" / 32	.218"				812.	678.	580.	509.	452.	408.	369.	339.	310.	291.	270.	255.	225.	204.	185.	169.5	155.9				
						.0665	.097	.132	.171	.215	.268	.322	.379	.445	.530	.595	.680	.860	1.060	1.290	1.540	1.780				
	4	.225"				895.	746.	640.	560.	498.	447.	407.	372.	345.	320.	299.	280.	248.	224.	203.	187.	172.2				
						.065	.092	.122	.165	.210	.256	.313	.365	.430	.505	.575	.663	.840	1.060	1.270	1.480	1.740				
	3	.244"				1120.	950.	811.	711.	632.	570.	527.	475.	438.	405.	381.	358.	316.	284.	259.	237.5	220.				
						.0595	.088	.116	.154	.194	.242	.295	.350	.415	.472	.550	.620	.775	.970	1.160	1.360	1.600				
	1" / 4	.250"					1027.	880.	760.	685.	617.	580.	513.	476.	440.	410.	385.	342.	308.	281.	266.	236.				
							.084	.110	.147	.188	.232	.284	.338	.395	.460	.525	.598	.760	.945	1.130	1.360	1.570				
	2	.263"					1195.	1125.	895.	795.	717.	632.	598.	551.	501.	478.	448.	400.	359.	328.	298.	278.7	258.	238.		
							.079	.106	.142	.180	.223	.264	.325	.375	.435	.500	.580	.725	.910	1.080	1.290	1.540	1.760	1.950		
	9 / 32	.281"					1450.	1240.	1087.	969.	869.	794.	724.	665.	620.	580.	543.	482.	435.	395.	362.	335.	310.	290.4		
							.074	.100	.134	.167	.205	.253	.295	.356	.410	.473	.532	.660	.825	1.010	1.200	1.400	1.630	1.890		
	1	.283"						1264.	1110.	985.	886.	805.	740.	682.	634.	592.	564.	492.	439.	402.	370.	341.7	317.	296.6		
								.099	.133	.166	.203	.252	.294	.348	.405	.465	.530	.650	.820	.950	1.190	1.390	1.620	1.860		
	1/0	.307"						1630.	1420.	1260.	1135.	1035.	945.	872.	810.	758.	710.	630.	568.	516.	473.	436.	406.	378.6	355.	334.
								.093	.121	.152	.186	.228	.272	.322	.372	.427	.490	.610	.760	.910	1.080	1.260	1.490	1.680	1.940	2.180
	5" / 16	.312"							1575.	1376.	1220.	1100.	1000.	915.	845.	775.	732.	687.	610.	550.	500.	460.	421.7	392.	366.3	343.
									.084	.110	.138	.172	.208	.247	.290	.336	.386	.442	.550	.690	.830	1.000	1.150	1.330	1.540	1.760

Contributed by Henry L. Hanson.

In this number entitled "Helical Springs."

III.—ALLOWABLE PRESSURE AND CORRESPONDING COMPRESSION OF HELICAL SPRINGS OF ROUND STEEL.

Max. Fiber Stress	No. W. & M. Wire Gauge	Diameter of Wire	Greatest Allowable Pressure in Lbs. and Corresponding Compression in Inches Per Coil. — Pitch Diameter of Spring.																								
			1"	1 1/8"	1 1/4"	1 3/8"	1 1/2"	1 5/8"	1 3/4"	1 7/8"	2"	2 1/4"	2 1/2"	2 3/4"	3"	3 1/4"	3 1/2"	3 3/4"	4"	4 1/4"	4 1/2"	4 3/4"	5"	5 1/4"	5 1/2"	5 3/4"	6"
115,000	2/0	.331"	1636.	1455.	1310.	1187.	1090.	1000.	932.	870.	818.	725.	653.	594.	545.	501.1	468.	436.5	410.	385.							
			.105	.130	.162	.195	.234	.273	.315	.365	.415	.520	.655	.790	.925	1.090	1.280	1.470	1.680	1.870							
	11/32	.343"	1820.	1620.	1452.	1325.	1214.	1120.	1040.	970.	910.	808.	728.	661.	608.	560.	520.	480.	454.	428.							
			.100	.128	.155	.190	.218	.268	.308	.353	.400	.505	.625	.750	.910	1.060	1.220	1.380	1.600	1.780							
	3/0	.362"	2140.	1910.	1714.	1560.	1430.	1318.	1220	1142.	1070.	950.	858.	778.	714.	658.	612.	571.	535.	504.							
			.095	.119	.147	.180	.210	.250	.290	.333	.382	.490	.595	.720	.850	.990	1.170	1.333	1.510	1.720							
	3/8"	.375"		2110.	1940.	1730.	1580.	1458.	1354.	1265.	1185.	1058.	950.	860.	790.	732.	678.	635.	592.	560.	528.	501.					
				.113	.144	.172	.205	.240	.280	.320	.360	.460	.570	.680	.820	.965	1.100	1.280	1.450	1.640	1.840	2.05					
	4/0	.393"		2430.	2180.	1984.	1820.	1680.	1560.	1458.	1365.	1212.	1092.	990.	910.	842.	780.	730.	682.	645.	607.	577.					
				.109	.136	.165	.198	.230	.265	.308	.348	.440	.545	.650	.780	.920	1.060	1.220	1.390	1.560	1.770	1.980					
	13/32	.406"			2400.	2170.	2000.	1840.	1710.	1600.	1500.	1330.	1200.	1090.	1000.	929.	855.	805.	750.	711.	666.	636.					
					.131	.159	.188	.220	.255	.295	.335	.420	.520	.625	.755	.890	1.000	1.120	1.330	1.530	1.670	1.840					
	5/0	.430"			2875.	2610.	2400.	2210.	2050.	1918.	1798.	1598.	1440.	1308.	1200.	1105.	1028.	964.	900.	840.	800.	755.					
					.128	.147	.182	.210	.242	.282	.323	.400	.500	.610	.725	.840	.980	1.160	1.280	1.420	1.600	1.820					
	7/16"	.437"			3000.	2730.	2500.	2310.	2140.	2000.	1880.	1665.	1500.	1365.	1250.	1159.	1074.	1004.	940.	880.	835.	793.	750.	717.			
					.123	.146	.178	.207	.241	.277	.318	.392	.492	.591	.704	.825	.958	1.000	1.250	1.400	1.580	1.760	1.960	2.150			
110,000	6/0	.460"				3065.	2800.	2580.	2400.	2230.	2100.	1865.	1680.	1530.	1400.	1293.	1200.	1118.	1058.	968.	932.	885.	840.	800.			
						.135	.162	.190	.220	.250	.287	.360	.445	.535	.645	.750	.885	.990	1.140	1.310	1.460	1.600	1.800	1.970			
	15/32	.468"				3225.	2940.	2725.	2530.	2375.	2210.	1970.	1770.	1610.	1472.	1362.	1265.	1181.	1110.	1082.	985.	929.	885.	845.			
						.133	.158	.186	.215	.247	.280	.357	.440	.530	.638	.740	.860	.970	1.130	1.260	1.420	1.580	1.740	1.940			
	7/0	.490"				3675.	3370.	3115.	2890.	2710	2535	2245.	2025.	1840.	1690.	1563.	1445.	1355.	1268.	1195.	1125.	1069.	1015.	967.	920.	883.	
						.126	.152	.176	.205	.238	.268	.338	.415	.505	.605	.705	.830	.940	1.070	1.200	1.360	1.500	1.680	1.840	2.040	2.220	
	1/2"	.500"					3610.	3320.	3090.	2890.	2710.	2410.	2160.	1970.	1810.	1691.	1550.	1439.	1352.	1263.	1205.	1136.	1082.	1026.	985.	939.	
							.149	.172	.203	.228	.265	.330	.410	.505	.595	.695	.810	.920	1.040	1.180	1.340	1.480	1.660	1.820	2.000	2.200	
	9/16"	.562"						4700.	4390.	4090.	3830.	3420.	3080.	2790.	2565.	2359.	2190.	2055.	1913.	1804.	1710.	1610.	1535.	1458.	1395.	1330.	1280.
								.154	.179	.208	.232	.295	.365	.442	.530	.615	.750	.820	.925	1.060	1.180	1.305	1.460	1.600	1.767	1.910	2.100
	5/8"	.625"							6100.	5600.	5260.	4660.	4210.	3825.	3505.	3242.	3000.	2812.	2630.	2480.	2340.	2216.	2110.	2000.	1913.	1830.	1750.
									.163	.184.	.200	.261	.328	.394	.472	.552	.642	.737	.844	.948	1.060	1.180	1.317	1.500	1.600	1.730	1.880
100,000	11/16"	.687"									6375.	5650.	5090.	4630.	4250.	3934.	3625.	3409	3195.	2992.	2825.	2669.	2560.	2425.	2330.	2214.	2125.
											.174	.218	.272	.327	.390	.460	.530	.610	.695	.790	.875	.970	1.090	1.200	1.330	1.450	1.560
	3/4"	.750"										7400.	6640.	6030.	5540.	5096.	4745.	4418.	4150.	3897.	3690.	3480.	3325.	3150.	3025.	2880.	2770.
												.203	.250	.303	.362	.420	.490	.558	.630	.720	.820	.905	1.000	1.110	1.220	1.320	1.440
	13/16"	.812"											8420.	7660.	7000.	6496.	6010.	5631	5280.	4940.	4675.	4425.	4200.	4000.	3825.	3655.	3500.
													.228	.278	.330	.388	.445	.515	.585	.665	.740	.825	.915	1.080	1.100	1.230	1.320
	7/8"	.875"											10530.	9550.	8700.	8111.	7500.	7015.	6560.	6190.	5740.	5530.	5250.	5000.	4770.	4575.	4370.
													.210	.255	.305	.360	.418	.480	.540	.620	.682	.765	.855	.950	1.030	1.130	1.220

Contributed by Henry L. Hanson.

IV.—ALLOWABLE PRESSURE AND CORRESPONDING COMPRESSION OF HELICAL SPRINGS OF ROUND STEEL.

Maximum Fiber Stress	Diameter of Wire	Greatest Allowable Pressure in Lbs. and Corresponding Compression in Inches Per Coil. — Pitch Diameter of Spring.												
		2 3/4"	3"	3 1/4"	3 1/2"	3 3/4"	4"	4 1/4"	4 1/2"	4 3/4"	5"	5 1/4"	5 1/2"	5 3/4"	6"
90,000	15/16"	10000.	9700.	8970.	8400.	7780.	7160.	6840.	6470.	6119.	5810.	5536.	5290.	5050.	4850.
		.2200	.2580	.3030	.3530	.4050	.4500	.5250	.5800	.6450	.7150	.7850	.8700	.9450	1.030
	1"		11780.	10874.	10100.	9424.	8800.	8316.	7850.	7440.	7050.	6732.	6330.	6150.	5870.
			.2450	.2720	.3300	.3780	.4250	.4900	.5400	.6000	.6700	.7400	.8000	.8900	.9600
	1 1/8"				14400.	13085.	12600.	11670.	11230.	10400.	10100.	9450.	9200.	8600.	8400.
					.2900	.3250	.3800	.4250.	.4850	.5280	.6000	.6450	.7250	.7800	.8350
	1 1/4"				19700.	18400.	17200.	16240.	15300.	14500.	13700.	13100.	12540.	12000.	11500.
					.2620	.3030	.3480	.3840	.4350	.4800	.5350	.5900	.6450	.7150	.7800
80,000	1 3/8"					21800.	20400.	19000.	18100.	17000.	16150.	15380.	14850.	14000.	13600.
						.2450	.2750	.3100	.3500	.3850	.4350	.4700	.5250	.5700	.6250
	1 1/2"					27150.	26500.	25440.	23500.	22300.	21400.	20300.	19300.	18200.	17700.
						.2150	.2550	.2950	.3200	.3550	.4050	.4350	.4800	.5200	.5750

These tables are based on { Maximum Fiber Stress 80,000 to 150,000 Lbs. Per Square Inch, Torsional Modulus of Elasticity 10,500,000.

For no vibration multiply actual load by 1.5

For moderate vibration multiply actual load by 2

For incessant vibration multiply actual load by 3

} and select resultant pressure in table.

In calculating deflection consider 2 coils as ineffective.

For helical springs of square steel multiply load by 1.2 and deflection by 0.59.

Contributed by Henry L. Hanson.